ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on Road Traffic Safety

Sixty-second-session
Geneva, 26–29 September 2011
Item 7 of the provisional agenda

Convention on Road Traffic (Vienna 1968)

Report of activity and proposal to WP.1 onVariable Message Signs

This Informal Document - submitted by the Government of Spain - provides an update of activities of an informal Variable Message Signs (VMS) expert group. It also proposes amendments and changes to the 1968 Convention on Road Signs and Signals in order to incorporate variable message signs therein.

VMS unit report of activity and proposal to WP.1

1.   In March 2010, in its 59th session, WP.1 requested the ad hoc group focused on VMS ("VMS Unit") to analyse and propose a way to restructure the 1968 Convention in order to fully include VMS.

2.   In order for this restructure to take place the VMS Unit believes the below issues need to be considered.

1.   Need for clear definitions of basic elements on the 1968 Convention.

3.   The group considers that a clear definition of what a road marking, a road sign and traffic light signals are, is required in order to improve coherence of the 1968 Convention itself, and also in order to work out VMS issues better. Presently, the title of the 1968 Convention mentions road signs and signals. Then it describes road markings, traffic light signals and road signs separately. Are road markings road signs? Are traffic light signals road signs?

2.   Need to differentiate between fixed and variable road signs.

4.   The VMS Unit believes that the Variable Message Sign definition should be the following one:

5.   A Variable Message Sign (VMS) is a sign for the purpose of displaying one of a number of messages that may be changed or switched on or off as required (taken from RE2). VMS comprise two types, continuous and discontinuous signs: continuous signs are those that are similar to fixed signs, the only difference being that by some electro-mechanical means they can show various messages. Discontinuous signs create messages using individual elements that can be in one of two states (or more) and can thereby create various messages on the same sign face (taken from EN 12966).

6.   This definition is based on the following rationale. Contrary to the past, in our days the category of what we call "road sign" is not adequately represented just by fixed signs. **Variable Message Signs** are also road signs.

7.   One should realise that the specific context in which road signs are presented to drivers has an influence on the driver's interpretation of such signs and on the subsequent actions taken by them. Two specific contexts are of relevance here due to its direct influence upon road sign comprehension:

(a)   The referent (reality) represented by the sign itself. One clear example is the danger warning signs concerning wind, congestion or snow, i.e. variable situations. When drivers on a trip to the mountains see fixed signs indicating the possibility of dangerous spots in August, or when they go home and are informed about the possibility of a congested section in a quiet Saturday afternoon, they understand such signs are placed there for other moments and don't react to them as if it was January or Monday morning. The very same sign has not the same meaning in very different contexts according to the nature of the sign itself.

(b)   Not all road signs have the same status in terms of the link to present (current, real-time) reality. Fixed signs presented to drivers are not always and exactly interpreted and reacted upon in the same way as road signs presented in variable format. A classical example is the swing bridge

danger warning sign. When presented in fixed format, such a sign indicates to drivers that they drive towards a swing bridge that may be open or closed (i.e., may be dangerous or not). When present in variable format, such sign indicates drivers that they drive towards an opened swing bridge, dangerous *in real-time*.

3. Need to relocate Lane Control signs.

8. VMS can show all types of graphic elements: words, numbers, signs, and also some traffic light signals (specifically crosses and arrows). This is already current practice in many countries. We advise WP.1 to reconsider the way traffic light signals are described, classified and shown in Chapter III, article 23 (point 11 a and b) and also in Annex 3 (red crosses and green and yellow arrows are not presently in Annex 3). We suggest creating an additional category of road signs within the 1968 Convention: lane control signs.

9. Our proposal is to move point 11 a and b from Article 23 to Annex 1 (with its corresponding nomenclature), introducing these crosses and arrows as road signs (specifically as lane control signs). This means adding point (v) on Article 5 point (b) and also showing the crosses and arrows as news signs in Annex 3.

4. Considerations concerning colour inversion.

10. As all of the VMS signs proposed within R.E.2 have to be included in the 1968 Convention, the group suggests either:

(a) Including all colour inverted signs listed on R.E.2 (and probably others) in Annex 3,

(b) To create anew Annex 4 to list colour-inverted pictograms listed on R.E.2 (and probably others),

(c) To leave all examples simply on the standard colour assignments in Annex 3 (even if probably only used on VMS) and let article 8 as the reference for colour inversion use.

11. It is important to note that certain signs (e.g., C,1a and C,2) are not advised to be shown using a colour inverted format due to perceptual properties (e.g., mixing only black and red).

5. Considerations concerning section "5.3.2 Rules for message content and message structure for VMS" on R.E.2.

12. The group proposes to include such information in a new article within Chapter II. Road signs.

6. Specific changes proposed by the VMS Unit.

13. The 1968 Convention integrates two main parts: the main body (chapters) and the annexes (specifically annexes 1 and 3). Following the WP.1 mandate the VMS Unit agreed to introduce the minimum changes possible in order to prepare an adequate entrance and permanence of VMS within the 1968 Convention. Below follow the proposed changes concerning chapters and annexes.

A. Changes concerning the 1968 Convention main chapters.

(a)   Chapter I. General provisions articles 1 to 4)

Article 1.Definitions.

(...)

(w) Road signs are… (to be thought up by an appropriate commission).

(x) Traffic Light signals are… (to be thought up by an appropriate commission).

(y) Road markings are… (to be thought up by an appropriate commission).

(z) A Variable Message Sign (VMS) is a sign for the purpose of displaying one of a number of messages that may be changed or switched on or off as required (*taken from RE2)*. VMS comprise two types, continuous and discontinuous signs: continuous signs are those that are similar to fixed signs, the only difference being that by some electro-mechanical means they can show various messages. Discontinuous signs create messages using individual elements that can be in one of two states (or more) and can thereby create various messages on the same sign face (*taken from EN 12966*).

(B)   Chapter II. Road signs (articles 5 to 22)

Article 8.

(…)

1.   ter. Variable Message Signs shall only be used for the management of temporary events. Issues which require long term signing in a static location shall always be shown on permanent (fixed) road signs. Compared to fixed signs, the interpretation of VMS might differ slightly since the event referred to is now occurring or expected to occur.

  (i)   Chapter III. Traffic lights signals (articles 23 to 24)

  (ii)   Chapter IV. Road markings (articles 25 to 30)

  (iii)   Chapter V. Miscellaneous (articles 31 to 36)

  (iv)   Chapter VI. Final provisions (articles 37 to 48)

2.   Changes concerning the 1968 Convention Annex 1.

  (see recommendation number 3 above)

3.   Changes concerning the 1968 Convention Annex 3.

  (see recommendations number 3 and 4 above).

———————